THAT WHICH IS CLAIMED:

1. A method for controlling a causticizing process which comprises slaking, causticizing and the preparation of white liquor, the slaking being carried out using a slaker into which green liquor and lime are fed to produce lime milk, the method comprising controlling the causticizing process by applying a model that describes at least a part of the process and controlling green liquor density on the basis of a total titratable alkali.

2. A method according to claim 1, wherein the causticizing process is controlled by applying a model describing the slaker.

3. A method according to claim 2, wherein the slaker is controlled on the basis of the difference between the slaker temperature and the green liquor temperature by correcting the set value for the temperature difference control on the basis of the difference between the target causticity of lime milk and the causticity titration or titrations, the set value for the causticity being determined primarily on the basis of a model describing the development of the causticity prevailing after the slaker to white liquor causticity.

4. A method according to claim 3, wherein the model in question is a static one and that it substantially follows the type shown in the curve of Figure 5.

5. A method according to claim 3, wherein the static model in question is corrected by calculating a quotient of an average of the differences in white liquor and lime milk causticities and a difference provided by the model on the basis of a production average, and by multiplying the quotient by a difference provided by the model.

6. A method according to claim 5, wherein the average is calculated for a period of 2 to 40 hours.

7. A method according to claim 3, wherein the model in question is a dynamic one.

8. A method according to claim 3, wherein the lime to green liquor ratio is controlled by correcting the lime to green liquor ratio using the temperature difference control in such a way that when the temperature deviates from the target, the ratio target is corrected to the opposite direction.

9. A method according to claim 8, wherein in connection with a production change, the lime to green liquor ratio is changed on the basis of the static model.

10. A method according to claim 9, wherein the static model changing the lime to green liquor ratio in a situation of production change substantially conforms with the curve shown in Figure 7.

11. A method according to claim 1, wherein green liquor density is controlled on the basis of a total titratable alkali by applying the following equation:

D = / kk,
where D is the green liquor density;
TTA is the total titratable alkali of the green liquor;
os is an offset; and
kk is a coefficient,
the offset being determined on the basis of the model.

12. A method according to claim 11, wherein the offset is determined on the basis of the green liquor TTA and a momentary density of the green liquor by applying a model including the coefficient.

13. A method according to claim 12, wherein the coefficient is a constant angular coefficient the value of which is between 0.9 and 1.4 when the unit used for expressing the TTA and the density is the same.

14. A method according to claim 11, wherein the model is specified by calculating averages for the variables used in the model.

15. A method according to claim 14, wherein after a sufficient green liquor

flow and regular titrations for 1 to 40 hours, averages of desired variables calculated over 1 to 40 hours are used in the model.

16. A method according to claim 1, wherein the green liquor density and the total titratable alkali are measured.

17. An apparatus for controlling a causticizing process which comprises slaking, causticizing and the preparation of white liquor, the slaking taking place in a slaker into which green liquor and lime are arranged to be supplied to produce lime milk, the apparatus comprising means for controlling the causticizing process by applying a model that describes at least a part of the process and means for controlling green liquor density on the basis of total titratable alkali.

18. An apparatus according to claim 17, wherein the apparatus is arranged to use a model that describes the slaker.

19. An apparatus according to claim 18, wherein the apparatus is arranged to control the slaker on the basis of the difference between the slaker temperature and the green liquor temperature in such a way that the set value of the temperature difference control is arranged to be corrected on the basis of the difference between the lime milk causticity target and the causticity titration or titrations, the set value for causticity being arranged to be determined primarily on the basis of a model that describes the development of the causticity prevailing after the slaker to white liquor causticity.

20. An apparatus according to claim 19, wherein the model in question is a static one and substantially conforms to the type shown by the curve in Figure 5.

21. An apparatus according to claim 19, wherein the model in question is a dynamic one.

22. An apparatus according to claim 17, wherein the apparatus comprises means for controlling green liquor density on the basis of the total titratable alkali by applying the following equation:

D = / kk,

where D is the green liquor density;
TTA is the total titratable alkali of the green liquor;
os is an offset; and
kk is a coefficient,
the offset being arranged to be determined on the basis of a model.

23. An apparatus according to claim 22, wherein the offset is arranged to be determined on the basis of the green liquor TTA and a momentary density of the green liquor by applying a model comprising the coefficient.

24. An apparatus according to claim 23, wherein the coefficient is a constant angular coefficient having a value between 0.9 and 1.4, provided that the unit used for expressing the TTA and density is the same.

25. An apparatus according to claim 17, wherein the apparatus comprises means for measuring the green liquor density and the total titratable alkali.